

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
14 October 2004 (14.10.2004)

PCT

(10) International Publication Number  
**WO 2004/088796 A1**

(51) International Patent Classification<sup>7</sup>: **H01R 13/623**,  
13/527, 24/04

(21) International Application Number:  
PCT/AU2004/000443

(22) International Filing Date: 5 April 2004 (05.04.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
2003901612 4 April 2003 (04.04.2003) AU

(71) Applicant (for all designated States except US):  
**HEAD ELECTRICAL INTERNATIONAL PTY LTD** [AU/AU]; 1 Cooper Street, Dudley, NSW 2290 (AU).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **WELLS, Mark**  
[AU/AU]; 1 Cooper Street, Dudley, NSW 2290 (AU).

(74) Agent: **GRIFFITH HACK**; GPO Box 4164, Sydney,  
NSW 2001 (AU).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

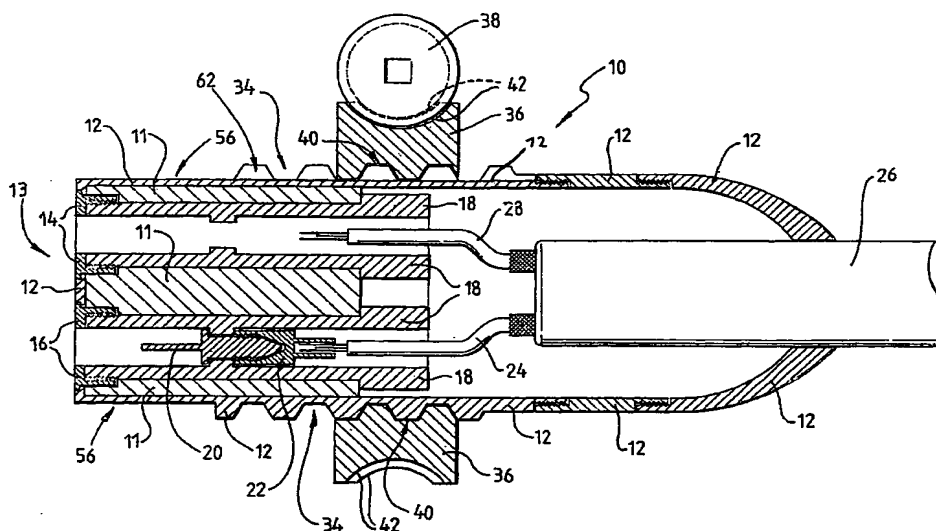
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: AN ELECTRICAL CONNECTION DEVICE



(57) Abstract: The present invention provides an electrical connection device for a machine cable comprising a first connector having a first contact and a second connector having a second contact the connectors being moveable between a disengaged condition in which the first and second contacts are remote from each other and an engaged condition in which the first and the second contacts are electrically connected. The device also comprises a drive for imparting a driving force to drive the first and the second connectors relative to each other whereby the first connector and the second connector move between the disengaged and the engaged positions. The drive is arranged to distribute the driving force around at least a portion of at least one of the first and the second connectors to minimize wedging, canting or seizing between connector surfaces and allows minimal mechanical clearance to provide a narrow path.